

Amendments to the Detailed Description:

Please insert on page 1, between “THREE-DIMENSIONAL IMAGE” at line 2 and “BACKGROUND OF THE INVENTION” at line 3, the following new paragraph:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of a priority under 35 USC 119 (a)-(d) to French patent application 99 07854 filed June 21, 1999, the entire contents of which are hereby incorporated by reference.

Please amend page 2, line 16, as follows:

BRIEF SUMMARY DESCRIPTION OF THE INVENTION

Please amend the paragraph at page 2, lines 17 to 19, as follows:

An embodiment of the The present invention is to remedy the disadvantages of the aforesaid methods and to propose a method for rapidly isolating a part of a three-dimensional image and easily and interactively modifying the form of the volume visualized.

Please amend the paragraph at page 3, lines 13 to 24, as follows:

In ~~a preferred~~ an embodiment, the predetermined volume can be displaced in the three-dimensional image according to a translational motion, while displaying only the part of the three-dimensional image contained at each instant in the predetermined volume. In an embodiment of the invention it is interactive. By displacing (by translation) the predetermined volume in a two-dimensional space [-], that is, the center of the predetermined volume is displaced along a plane parallel to the display window, all of the elements of the three-dimensional image close enough to the plane to be visible in the predetermined volume can be scanned. The displacement is obtained by repeating stages b), c) and d) and by taking as new center of the predetermined volume a point situated in the plane (plane parallel to the display window and passing through the first point taken as

center of the predetermined volume) and away from the preceding center by a length chosen by the radiologist.

Please amend the paragraph at page 3, lines 25 to 27, as follows:

Instead of ~~But preferably, rather than~~ displacing the predetermined volume, the three-dimensional image is moved keeping the predetermined volume fixed on the display window.

Please amend the paragraph at page 4, lines 1 to 6, as follows:

According to ~~another~~ preferred embodiment, one displays the part of the three-dimensional image contained in the predetermined volume as well as any other part of the three-dimensional image not contained in a cylinder, with the predetermined volume, of section identical to the section of the predetermined volume and of infinite length, while any part of the three-dimensional image not contained in the cylinder is displayed in degraded mode.

Please insert on page 4, between lines 19 and 20, the following:

BRIEF DESCRIPTION OF THE DRAWINGS

Please amend on page 4, line 23 by deleting:

BRIEF DESCRIPTION OF THE DRAWINGS

Please amend the paragraph at page 4, lines 24 and 25, as follows:

[-] Figure 1 is a three-dimensional image containing a plurality of blood vessels and a hard-to-see aneurysm [.] ;

Please amend the paragraph at page 4, lines 26 and 27, as follows:

[-] Figure 2 is a three-dimensional image obtained according to an embodiment of the invention by isolating the aneurysm in particular [.] ;

Please amend the paragraph at page 5, lines 1 and 2, as follows:

[-] Figure 3 is a three-dimensional image obtained as a result of a translational motion with the image of Figure 2 [.] ; and

Please amend the paragraph at page 5, lines 3 and 4, as follows:

[-] Figure 4 is a view of the predetermined volume with a part of the three-dimensional image in degraded mode.

Please amend the paragraph at page 5, lines 6 to 15, as follows:

Referring to Figure 1, a display window 1 shows a main blood vessel 2, branching out into a multitude of secondary blood vessels 2a-2f. On an upper part of the main blood vessel, there is an aneurysm 3 ~~which~~ that is hard to distinguish, for it is surrounded by secondary blood vessels 2b-2f. When a radiologist wishes to study this aneurysm 3, he can pivot the image, in a manner well known to one skilled in the art, in order to visualize it at different angles. But, as can be seen on the image, the group of secondary blood vessels 2a-2f surrounding the aneurysm 3 prevents good visibility of the latter, whatever the angle of view. In order to be able to pass beyond the secondary vessels 2b-2f and enter a restricted space in which the aneurysm 3 is clearly visible, an embodiment of the invention provides for the isolating of the aneurysm 3 in a given volume.

Please amend the paragraph at page 6, line 26 to page 7, line 8, as follows:

As can be seen in Figure 4, another ~~advantageous~~ characteristic of an embodiment of the invention is the possibility of displaying the sphere 5 and a part of the three-dimensional image not contained in the sphere on the same window. The part not contained in the sphere is displayed in degraded mode, for example, with a weaker gray level than the gray level of the image contained in the sphere 5. To visualize the sphere 5 well, the part of the three-dimensional image not contained in the sphere is equivalent to a part of the three-dimensional image that would be determined by placing an empty cylinder, the axis of

which is perpendicular to the display window 1 and passes through the center of the display window. Furthermore, the circular section of the cylinder has a diameter equal to the diameter of the sphere 5. Therefore, by visualizing the image of Figure 4, the initial three-dimensional image is visualized in degraded mode, except for the elements contained in the sphere 5, and any element situated in front of and behind the sphere 5 (in relation to the angle of vision of the display window) is erased.